across the blue of sky and sea. One could not glance in any direction without a sense of dizziness from the rapidly changing figures of the webb.

There were perhaps 500 nesting pairs on the island, making a thousand birds; but this is a mere estimate. An occasional Western Gull seen among the lighter colored Glaucus-winged, led us to estimate their numbers at fifty or thereabouts.

THE YEAR 1908 IN SOUTHEASTERN MICHIGAN.

BY P. A. TAVERNER, HIGHLAND PARK, MICH.

The year of 1908, in the neighborhood of Detroit, Mich., was an abnormal, and in some ways a rather interesting, one. The spring was much delayed and remained cold long beyond its usual custom. The previous winter was relatively birdless and uninteresting. The weather was about normally cold, but February 5 a heavy sleet storm came, with a temperature for a day ranging from 9 to 37 degrees. There was at the time a foot of snow on the ground, and the result can be readily imagined. The snow was heavily crusted and the Bob-whites, that up to that time had wintered well, suffered severely. The winter of 1903-04 had practically wiped the species out in this section, and under a protective game law, enacted for this purpose, the birds had just begun to regain their normal numbers. This last blow completely undid the good work of the past three years, locally at least, and, as a result, during the past spring, summer and fall the quail I have seen could be counted on the fingers of one hand.

March was not far from normal in temperature, as also was early April, though during the latter part it steadily refused to warm up as expected. This backwardness extended well into May and all the migrations were delayed in consequence. It was not until May 10 that any real spring weather arrived, and up to that time we had to keep the furnace going continuously. Normal years I regard May 4 as marking about the

height of the warbler migration. This year, however, there were practically no warblers present until the 17th, when they rushed through in almost a day, hardly pausing en route long enough to feed. The consequence was that many common species were barely noted and others passed through entirely unobserved. This was in striking contrast with the spring previous, which was also a much delayed season, with the difference that the cold weather lasted longer and caught many species which were here with us, preventing them from departing and giving us extraordinary opportunities for observing them. One thing I noticed both years. Cold days, after the arrival of the more delicate species, most of the warblers were found feeding on the ground, and in the open fields bordering on their usual woodland haunts. Most likely the caterpillars, worms, and flies forming the staple articles of their food supply, were numbed with the cold, and had lost their hold upon the branches of the trees, and had fallen to the ground.

The summer was neither very hot nor very cool, but it was very dry. June and July received but half their normal precipitation. The first half of August received its share of rain, but beginning the 19th, the longest dry spell set in that has been known in this section since the establishment of the meterological records, thirty-eight years ago. From then on no rain fell until September 28, when a little over half an inch fell, just sufficient to lav the dust for a day or so. During October we had a total of 1.49 inches instead of 2.36, which was our due. The effect was interesting if not pleasant. Many crops ripened before they were well filled out, and trees and shrubs went into their winter hibernation some weeks earlier than usual. The maples and other brilliantly colored fall leaves simply turned yellow and fell to the ground with little if any display of color, and the last of September the woods had assumed almost the appearance of late October. Certain insect life was profoundly affected; notably the genus Catocala, the Underwing Moths. It was supposed that they were unable to work their way up through the baked ground and issue from their chrysalid state. Through the first of August, while we had rain, they were unusually abundant for that

time of year, but as soon as the drouth began to make itself felt they disappeared, and through September, about the second week of which they should be at their commonest, we "suggared" night after night, but scarcely a moth came to our baits. The electric lights, that usually attract great numbers of insects, were almost deserted; butterflies and beetles were also scarce, and the summer, from a lepidopteral standpoint, was a disappointment.

That this had a powerful effect on bird life can hardly be doubted and, I think in consequence, some species departed south rather earlier than they would otherwise have done. From the vicinity of Ann Arbor I get reports that warblers were unusually abundant this fall. This, however, hardly agrees with my experience here. I found them, if anything, rather scarce; though this might well have been more apparent than real, through not being in the proper places at the right time. With it all, however, a considerable amount of rather interesting data has been gathered in various directions, some of the most striking of which I here copy from my note-books. Some of this has been heretofore published in the Auk, but in putting it all together a little repetition will do no harm.

As indicated in the last number of the Bulletin in the Pelee list, last winter we were favored with another visit of Brunnich's Murre. The cause or causes that drive this typically arctic bird out of Hudson's Bay into our inland lake waters is one of the interesting mysteries of ornithology. Mr. J. H. Fleming has investigated the subject with great care (Pro. IV. Int. Cong. pp. 528-543) and supposes that they were caught between the field ice of the Bay and the shore and thus forced out. On our Great Lakes they show a great preference to following the shore-line, and seem to follow it on until they drop with exhaustion. It may be that this headstrong peculiarity is the cause of their undoing. Forced on a flight for open water, some of them follow the shore-line south and finally find themselves in the bottom of James Bay. Still insisting in keeping on, instead of turning back, they ascend one of the tributaries to its sources, cross the ridge of land to the head waters of the Ottawa and so to the St. Lawrence

River, where they first appear to the observation of science. However this may be, it is pretty certain that none ever return to their home habitat to tell the tale of their travels. Once away from their arctic home they all die of starvation. Even those that work down the St. Lawrence to salt water seem to meet the same fate. The food habits of the species seems never to have been worked out, and it is at present impossible to say why they are unable to eke out a living in the lower latitudes. Had some of the Arctic expeditions collected stomachs as well as bird skins this interesting little question might be readily solved. There is one question that comes up. The first occurrence of the Murre flight on the Great Lakes scenis to have been in 1893. Now Hudson's Bay has been freezing, and the wind has been blowing the ice about year after year. Why then is it that it has only been of late that the species has appeared here? Though this has so far failed to receive satisfactory answer, Mr. Fleming's theory remains the most probable one and, until a better one is advanced, forms the only working hypothesis we have.

At any rate, since 1893, almost yearly, the birds have appeared in late November and early December on Lake Ontario in greater or less numbers, have struggled on and on until their strength left them and they sank down wearily in the lake, their bodies marking the final limit of their flight. Usually but few of them get farther in this direction than this end of Lake Ontario, but occasionally considerable numbers have appeared as far up as Lake St. Clair. This last winter was one of these latter cases.

November 30 nine were seen off Grosse Point at the head of the Detroit River, and three were taken. December 3 one was taken on Lake Erie, near Munroe. December 7 I received one from Windmill Point, Lake St. Clair, and two more were taken near Munroe at different times during the same month. A Point Pelee bird has already appeared in these pages. All examined were in the same state of emaciation.

March 28, a live Yellow Rail was brought to me. It had been caught by a dog, and was one of two seen. This bird is rare enough at any time to make it something of an acquisi-

tion, but to get it at this early date was considerable of a surprise (Auk, 1908, p. 327).

Red-breasted Mergansers are usually rather scarce on the River, being generally far outnumbered by their relative, the American Merganser. This spring quite a number were brought in to the taxidermists to be mounted.

April 6 an interesting Canada Goose was taken on the Flats and brought in to be mounted. Its head and neck were of normal color, the remainder of the body was albinistic, especially the upper back, sides and under parts. The rump, tail and wings are darker, but still much bleached and whitened. The shooter said that it had been noticed in the same vicinity for several springs and repeated attempts had been made to take it. The bird was very conspicuous and could be easily recognized from a distance. This is a fact of some little migrational interest, bearing, as it does, on the subject of individuals following identical migration routes year after year, a fact easy to believe but difficult to demonstrate.

About April 26 large numbers of Horned Grebe put in an appearance on the upper Detroit River. One gunner that I heard of shot thirty one afternoon from the head of Belle Isle. Mr. Norman A. Wood writes me from Ann Arbor that this spring he saw more of this species there than he ever saw before.

May 29 an American White Pelican was killed at the St. Clair Flats and brought in to the taxidermist's, where I examined it. To my knowledge there is but one other record for the county.

May 3 a Bartramian Sandpiper was shot by some trapshooters almost within the city limits. The publication of this record in the Auk, 1908, 328, brought forth other data of the bird's occurrence in the county, Wood *ibid*, 473. According to this authority, the bird was met with this spring in Livonia and Canton Townships. Our last previous date is recorded by Mr. Swales, Auk, 1904, 84, east of Detroit, October 20, 1903. This bird from once being quite common is now rare and extremely local in its haunts. Doubtless a few still breed in isolated localities, but it is a pity that this fine

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bird should be on the verge of extinction in the state. Its fondness for dry upland fields, however, brings it too closely in contact with our rural civilization and it falls easy prey to the farmer boy and his shotgun.

May 9, that daintiest of the waders, Wilson's Phalarope, occurred here again. There is but one spot in the county where it has so far been seen; a small pond or mud hole of two or three acres in extent a few miles south of the city. Apparently a few stop here for a few days in early May each spring, though as far as I know, they are the only ones in the county. The above date one was observed and taken.

May 5, 1906, I watched a high-plumaged female here for half an hour or more as it swam about in the water, cutting circles and figures like a big bright-colored whirligig-beetle, and leaving behind it long lines of wavelets in the water that curved and intersected themselves a hundred times, sparkling in the sun. Ever and anon it made quick passes with its rapier-like little bill to right or left, striking out with a straight, even thrust and immediate recovery like a practiced fencer, as it gleaned some toothsome morsel from the surface of the water. Between whiles it arched its slender neck in the prettiest curves imaginable, glancing rapidly around to see that nothing escaped; or looked down through the water directly beneath with an air of unconscious gravity, combined with a hasty eagerness that would have been comical had it been less full of grace. Its striking colors, nervous energy, quick harmonious movement, combined with perfect poise and selfpossession made it a rarely charming picture there in the bright sunshine and black water.

May 16 I had a little experience with a Whippoorwill that was of some interest. The bird fell to my gun with a broken wing. On going to pick it up it spread its wings over the ground and ruffled its feathers until it appeared twice its natural size, opened its cavernous mouth to its widest extent and hissed or blew at me in exactly the same manner as does the Hog-nosed Snake or Blowing Adder. The sound was quite loud, and could be heard distinctly while standing several paces distant. The sight of that great expanse of sickly

pink mouth, ending in a black hole of a gullet, together with the unexpected and threatening noise, was startling, and would, I doubt not, have caused the sturdiest hawk to hesitate a moment had he paused long enough to see it.

The Gray-cheeked Thrush is generally silent as far as song goes, as it passes through here. May 16, however, one broke the rule and favored us with selections that are usually reserved for the more northern home. He sat on a telegraph wire passing the rear of the house and there sang all one late afternoon. The song was too rich, varied and illusive to put into words. Some day, perhaps, some one will perfect a method of recording bird songs by which all their beauty can be preserved. So far such attempts have been futile to the masses, and of use to the few but to stimulate the imagination to the memory of songs once heard before.

White-crowned Sparrows have been rather scarce in this section since the fall of 1904. Since then and up to this spring the numbers of this species I have seen have been remarkably few. This year, however, they have been more common, and I have again noted them in their usual numbers, both spring and fall.

August 9 I heard and watched a Carolina Wren sing for some time in almost the same locality where I took another one August 11, 1906, as described in the Auk, 1907, 147. It was deeply interested in exploring the recesses of an old stump and brush pile. Led hither by its bubbling bursts of song, I approached very closely. It saw me, but that did not hinder its continuing the work in hand. It kept right on, merely satisfying its curiosity with an occasional peek-a-boo look at me from under or over or around a bit of stick, then exploding with a perfectly indiscribable burst of song, afterwards regarding me with a sparkling black eye and a quizzical twist of the head, as if to say, "You can't do that." And I had to admit that I could not.

It is rather a peculiar coincidence that the first and second records for this species in the county should have been made in spots not a hundred yards removed from each other and within three days of the same date, though two years apart. August 22 the same bird, or another in the same place, was observed. It is to be hoped that the species forms a permanent settlement with us as it would form a most interesting addition to our avi-fauna.

The resident Woodcock covers seem pretty well depleted this summer, and in places where one or two can usually be found through the summer none were seen until the migrants came in in October. The cause of this is hard to tell unless it was the general æstivation of the marshy grounds driving them out to seek food and shelter elsewhere, though this did not occur until August, and their absence was noticed as early as April.

August 9 I took an Underwing Moth (Catocala cara) that had some ornithological interest. Across the fore part of both upper and lower wings appears a V-shaped mark, sharp and clear, as if made by a knife, where the colored scales have been removed. It is the mark made by the snap of a bird's bill and so clearly shaped is it, that the species of the bird can be easily recognized. It was evidently a Crested Flycatcher whose sharp eves discovered this moth asleep on the tree bark and coveted it. Evidently the moth disposed otherwise in that case, only to be secured later in my collecting bottle. This moth, as it sleeps in the day time against the bark with its wings folded, so exactly matches the surface that it is on as to escape all but the closest scrutiny. Evidently, however, protective coloration has met its match in the sharp eye of the flycatcher. This is not the moth's only protection. It usually sleeps on the under side of a trunk with its head down. On the approach of an enemy it waits until the last moment before being touched and then drops with a disconcerting suddenness that usually baffles the inexperienced, and often the experienced as well. Then off it goes with a strong, though jerky flight, alternately displaying and concealing the brilliant red and black banding of its hind wings in a manner that makes it most difficult to follow even with the eye. From the positions of the bill marks on both wings it is evident that the attempt to capture was made while the moth was sitting quietly. Once caught its strength and quickness had enabled it to tear away and once free and flying it would have to be a quick flycatcher to capture it again.

It seems as if the Cape May Warbler has increased considerably in numbers the last few years. It was once regarded as the rarest of our Warblers, but now its observation arouses but mild enthusiasm. Especially is this true in the fall. September 5 I saw what I took to be a juvenile male, and the 20th following I took an adult male in almost the same locality.

The first fall Lincoln Sparrow was observed and taken September 13. This is our earliest fall date for the species, most of our arrival dates falling after the first of October. It is so secretive a bird, however, and so resembles the Song Sparrow in the hasty glimpses that we usually get that it is one of the easiest birds we have to overlook.

The same day, September 13, Mr. Albert Jones, of this city, took a Golden Plover and a Baird's Sandpiper on the little mud hole before spoken of under Wilson's Phalarope. For the present known status of the former, see Auk, 1907, 141.

Baird's Sandpiper I have long looked for, as some were taken some years ago near the city. May 4, 1907, I saw a small group of sandpipers in this same locality that I was confident belonged to this species, but being unable to take any could not coroborate my identification. They may vary in numbers during migrations here, but they certainly are not a common species with us.

September 27, took a very early Fox Sparrow. Our usual dates for the arrival of this species fall in early October.

The same day took a juvenile Philadelphia Vireo. Though this species has been reported as a common fall migrant, this is the first bird I have seen in this locality, in spite of careful search for the past five years.

October 21 and 31, single Old-squaw Ducks were brought in to be mounted at the taxidermist's. These are early records also. We usually do not see them until about November 7. This is far from being a common species on the river.

Through October and November various reports have come in of the prevalence of various winter birds, such as Pine Siskins, American and White-winged Crossbills, Redpolls, and Snowy Owls in surrounding territory; so present indications are that this winter will be a most interesting one from an ornithological standpoint, and it will be well to keep sharp eyes open during the coming months for our rare winter visitors.

BIRD NOTES FROM MIDDLE WESTERN OHIO. BY W. F. HENNINGER.

Some of the observations made during 1908 at New Bremen, Ohio, in the region between the Grand and the Loramie Reservoirs, also including some field work at these Reservoirs are of more than local importance and as my pastoral work carries me over approximately 50 square miles they are certainly typical of the entire region.

On February 5th, after a funeral I met a flock of some 20 to 25 Lapland Longspurs (*Calcarius lapponicus*) in company with some Prairie Horned Larks on small knolls in fields covered entirely with slushy snow.

Migration started in briskly on February 28 up till March 11th, then it seemed to be checked till March 24th, the Purple Martin not showing up till April 1st. This continued till April 26th. April 24th bringing the Wood Thrush, and the Baltimore Oriole, April 25th the Scarlet Tanager, the 26th the Yellow Warbler and the American Redstart. Two weeks of rain and cold weather set in with the evening of April 26th. Some of the earlier birds, however, were nesting by this time.

April 27th a fine set of five eggs of Accipiter cooperi were taken out of a nest 40 feet up in a pin oak, $3\frac{1}{2}$ miles east of New Bremen in Shelby County. At the same place a small heronry of some 10 to 12 nests of the Great Blue Heron was found with the old ones already on their nests. The same date showed a Bluehird's nest with 2 young and a Killdeer's nest with 4 young just out of the shells. A Blue Jay's nest with six fresh eggs was found on the next day, but the little Field Sparrow did not have its full complement of four eggs till May 12. In spite of the bad weather migrants continued to arrive, the most interesting ones being the Savannah Sparrow on May 6th, and the Cape May Warbler on May 11th. May 14th